## Amendments to the Specification:

Please replace the paragraph beginning on page 1, line 31, and continuing to page 2 line 11, with the following rewritten paragraph:

To improve the transmission quality, mechanisms have been developed, which allow for the transmission of time-synchronous data, especially multimedia data, in real-time. The goal of these mechanisms is to improve the QoS - Quality of Service - by treating time-synchronous data with a higher priority for transmission than other traffic. Time-synchronous data is therefore transmitted with a higher probability than other data. One of the disadvantages of these mechanisms is the inability to ~~cover~~ <u>recover</u> from transmission disturbance of time-synchronous data caused by fluctuations of network transmission characteristics. This is especially true for fluctuations in network parameters due to physical limitations, especially in the case of wireless networks.

Please replace the paragraph on page 2, lines 25 to 31, with the following rewritten paragraph:

Especially in wireless networks due to the intrinsic physical limitations, IP packets can get lost, leading to a significant degradation of media quality. In ~~opposite~~ <u>contrast</u> to the transmission over copper or fiber cables, losses actually happen more often. This so called burst characteristic of wireless networks has especially detrimental effects.

Please replace the paragraph on page 5, lines 1 to 7, with the following rewritten paragraph:

The processing unit 3" starts the processing of the input data ~~data~~ at time $t_0'$ and the transmission of the first processed <u>data</u> at time $t_0'+\delta_2$ due to the intrinsic delay ~~σ2~~. This means, that during the time period $t_\gamma = [t_0 + \delta_1 + i\Delta t, t_0' + \sigma2]$ no data output can be generated. This time period is donated as gap time $t_\gamma$.

Please replace the paragraph on page 5, lines 12 to 14, with the following rewritten paragraph:

With $t_0'=t_0+(j-1)\Delta t$, the first frame, that can be delivered from the new processing unit 3" can be computed.

Please replace the paragraph on page 6, lines 11 to 28, with the following rewritten paragraph:

According to the invention the goal described above is achieved with the mechanism for transmission of time-synchronous data, ~~which attributes are described in patent claim 1~~. According to ~~that claim~~ the invention, the mechanism is built and extended in such a way, that a parallel processing unit is setup and/or adapted based on changed <u>sender</u> data ~~load~~ <u>rate</u> and/or network characteristics. Here, setup means to instantiate and initialize the respective subcomponents of the processing unit. Adapting means configuring or changing attribute parameters of the involved subcomponents (e.g. quantization matrix of a compressor or packet length of a packetizer). Initializing means to reserve the necessary resources (e.g. memory) and to bring the component in a state which is ready to perform tasks. The processing and/or transmission of data in this parallel processing unit is performed after switching to that parallel unit, preferably using a switch.

Please replace the paragraph beginning on page 6, line 29, and continuing to page 7, line 28, with the following rewritten paragraph:

According to the invention it has been observed, that in ~~opposition~~ <u>contrast</u> to the common practice, a good transmission quality can not be achieved by only adapting the used data compression scheme to the changed <u>sender</u> data ~~load~~ <u>rate</u> and/or network characteristics. Instead, to achieve an overall high quality transmission, transmission quality has also to be ensured during the adaptation. In addition it has been observed, that the adaptation to changed <u>sender</u> data ~~load~~ <u>rate</u> and/or network characteristics has to be performed independently of the current

used processing and/or transmitting unit. This is necessary to ensure, that no further degradations of transmission quality is caused by the adaptation process itself. According to the invention this is achieved through the setup of a parallel processing unit, which is adapted to the changed <u>sender</u> data ~~load~~ <u>rate</u> and/or network characteristics. This avoids completely any losses during the de-attaching, adaptation, and re-attaching of the processing unit, since the data processing and transmission is continued within the original processing unit during the setup and/or adaptation of the parallel processing unit. Only afterwards the parallel processing unit is connected, ~~preferable~~ <u>preferably</u> using a switch, such that the processing and/or transmission of data is performed within the parallel processing unit. This ensures a high transmission quality also during the adaptation and therefore improves the overall transmission quality during situations with changing <u>sender</u> data ~~load~~ <u>rate</u> and/or network characteristics. With processing, any kind of means for modification, processing, storing or any other kind of data-related actions is included. The switch can hereby be realized as hardware or software.

Please replace the paragraph on page 9, lines 6 to 15, with the following rewritten paragraph:

In a further advantageous way, the processing unit and/or the parallel processing unit could be initialized, preferably after the setup. During the initialization, internal data structures could be ~~initialized'~~ <u>initialized</u> and/or necessary resources could be requested from the processing unit and/or the parallel processing unit, which would prepare the processing unit and/or parallel processing unit to be ready for processing. Through a premature initialization of the parallel processing unit, an overall increased adaptation could also be achieved.

Please replace the paragraph on page 9, lines 16 to 28, with the following rewritten paragraph:

To achieve a particular good adaptation, the subcomponents of the parallel

processing unit could be tuned to each other and/or the changed <u>sender</u> data ~~load~~ <u>rate</u> and/or network characteristic. In particular the compression method used in the codec could be adjusted to the changed network characteristic. Additionally or alternatively, also for example the memory buffer could be increased or decreased, to allow for tuning the parallel processing unit to the changed network characteristics. Also, the packetizer could be adapted to the changed network characteristic, which divides data into packets to prepare them to be send using RTP streaming or any other appropriate streaming protocol.

Please replace the paragraph beginning on page 9, line 34, and continuing to page 10, line10, with the following rewritten paragraph:

Alternatively, the subcomponents of the processing unit could also remain connected after switching. For example, this could be realized in a way, that the processing unit is only maintained a certain period of time after switching. This would mean, that the subcomponents of the processing unit would only be connected during a certain period of time. This could be ~~particular~~ <u>particularly</u> advantageous, if enough resources are available in the system, and there exists a high probability, that the next trigger event will require ~~to use~~ <u>using</u> the original processing unit again. If the original processing unit is used again, the parallel processing unit could be treated in the same way as the processing unit after switching.

Please replace the paragraph on page 10, lines 11 to 22, with the following rewritten paragraph:

To allow for a particular high efficiency, additional parallel processing units could be setup and/or adapted based on changed data load and/or network characteristic. This would be especially advantageous for hierarchical compression schemes with several synchronized data ~~stream~~ <u>streams</u>, since they could then be adapted in parallel. If enough resources are available in the system, it could also be possible to maintain a complete set of parallel processing units, such that the adaptation to

changed <u>sender</u> data ~~load~~ <u>rate</u> and/or network characteristics could be based on choosing one of the already synchronized parallel processing units.

Please replace the paragraph on page 11, lines 2 to 12, with the following rewritten paragraph:

Actually, various possibilities exist for the design of the idea of this invention to be implemented and developed further. For this ~~it is referred to the patent claims listed after patent claim 1 as well as~~ <u>reference is made</u> to the following explanation of a preferred embodiment example of the invented mechanism for the transmission of time-synchronous data as outlined in the drawing. In combination with the explanation of a preferred embodiment of the invented mechanism using the drawing, commonly preferred variations and further developments of the idea will be explained.

Please replace the paragraph on page 11, lines 13 to 17, with the following rewritten paragraph:

The goal of this invention is therefore to describe a mechanism for the transmission of time-synchronous data as described above, which allows for improving the transmission quality of time-synchronous data in the case of varying <u>sender</u> data ~~load~~ <u>rate</u> and/or network characteristics.

Please replace the paragraph on page 14, lines 21 to 29, with the following rewritten paragraph:

Table 1 shows a comparison between the known mechanism and the mechanism according to the invention for some specific variations. If ideal processing units and parallel processing units can be assumed, which can be initialized immediately and have an intrinsic codec delay of $\delta = 0ms$ seconds, each <u>of</u> the known mechanism according to Fig. 1 as well as the mechanism according to the invention according to Fig. 3 show the same performance.